

A mystery solved: the identity and distribution of Kalinowski's Tinamou *Nothoprocta kalinowskii*

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Received 16 September 2004

Kalinowski's Tinamou *Nothoprocta kalinowskii* Berlepsch & Stolzmann 1901 is believed to have an unparalleled geographical range and to be on the brink of extinction (Collar *et al.* 1992, BirdLife International 2000). The type specimen was collected in mountains near Licamachay, a location thought to be near Cuzco, in interior south-central Peru (Stephens & Traylor 1983). Much later, two additional specimens, both from dpto. La Libertad, in the western Andes of northern Peru also

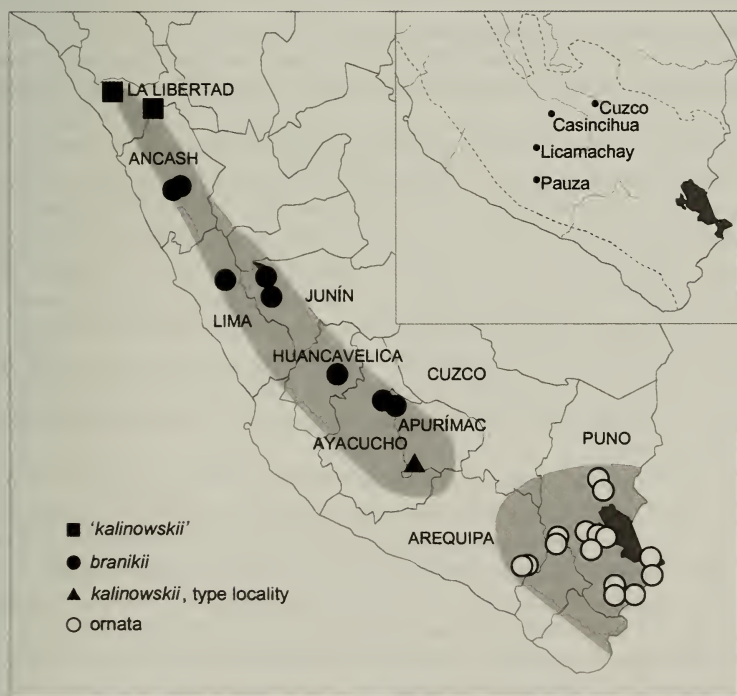


Figure 1. Distribution in Peru of *Nothoprocta ornata*, based on specimen records. Shown are the locations of the two specimens of *Nothoprocta kalinowskii* at the northern end of the distribution of *Nothoprocta ornata branickii* and of Licamachay, the type locality of *kalinowskii* near the southern end of the distribution of *branickii*. The exact location of Licamachay is not known, but was estimated from Kalinowski's route in the spring of 1894 (inset map; see text).

were identified as *kalinowskii* (Meyer de Schauensee 1966, Vasconcelos 2002). Thus, the reported distribution of *kalinowskii* is highly disjunct and quite unlike that of any other Peruvian bird. And, if all three specimens of *kalinowskii* represent the same taxon, it is difficult to imagine how *kalinowskii* could be a subspecies of the widespread Ornate Tinamou *Nothoprocta ornata*, as suggested in some literature (Hellmayr & Conover 1942, Blake 1977, Fjeldså & Krabbe 1990), and yet occur in two highly disjunct populations at opposite ends of the distribution of another subspecies of *ornata*. Furthermore, the apparent extreme rarity of *N. kalinowskii* led to its classification as 'Endangered/Extinct' by BirdLife International (Collar *et al.* 1992).

This confusing situation arose, at least in part, because few ornithologists ever studied the type specimen; apparently, few ornithologists paid due attention to details of the type description either. Recently one of us (NK) re-examined the type of *kalinowskii*. This led to a re-evaluation of the status of this taxon. In brief, the type of *kalinowskii* from Licamachay is a junior synonym of *Nothoprocta ornata branickii*. The two specimens of '*kalinowskii*' from La Libertad, although redder than other specimens, may represent nothing more than individual or perhaps clinal variation. Our investigations reveal that the two isolated populations of *Nothoprocta kalinowskii* are not the same, and that neither population represents a distinct species.

N. kalinowskii was described by Berlepsch & Stolzmann (1901), on the basis of a single specimen collected on 1 May 1894 at Licamachay by Jean Kalinowski. Berlepsch and Stolzmann described the location only as 'Peruvia centrali: circum Licamachay, Kordiljery'. Just five years after describing *kalinowskii*, Berlepsch & Stolzmann (1906) discussed the travels of Kalinowski thus: 'In April 1894 he travelled towards Cuzco, capital of the department, also visiting Licamachay and Curahuasi (Apurímac Valley)'. This statement may have influenced Vaurie (1972) and Stephens & Traylor (1983) to place Licamachay in dpto. Cuzco. No one has been able to locate a place by that name in Cuzco, and searches for a bird resembling the type of *kalinowskii* in the vicinity of Cuzco also have failed (B. Walker *in litt.* 1999).

Based on a digitised database of specimens in the Warsaw Museum forwarded in 1999 to TSS by Dr Mazgajski of the Polish Academy of Science, it was possible for TSS to reconstruct the Peruvian itinerary of Kalinowski (Table 1). It is evident that Licamachay was en route between Pauza, southern dpto. Ayacucho and the town of Cuzco, dpto. Cuzco. The final day Kalinowski collected a specimen at Pauza was on 11 April 1894. He was in Cuzco a month later, on 13 May. We are aware of only three specimens collected by Kalinowski during the intervening period. These three specimens collected en route were taken at Licamachay on 1 May (the type of *N. kalinowskii*), at Casinchihua on 7 May (*Pachyramphus validus*) and at Curahuasi on 10 May (*Poospiza caesar*). Casinchihua and Curahuasi are known localities in the Apurímac Valley. Evidently, Kalinowski collected at Licamachay before descending into the Apurímac Valley on his way to Cuzco. He

could not have travelled all the way from dpto. Ayacucho to Casinchiua in just six days, so Licamachay must have been situated somewhere in dpto. Apurímac. This places the type locality of *kalinowskii* very close to or within the range ascribed to the central Peruvian race of Ornate Tinamou *N. ornata branickii* (see Fig. 1).

In September 2003, during a visit to the Museum and Institute of Zoology, Polish Academy of Science (MIZPAS), in Warsaw, NK examined and photographed the types of *N. kalinowskii* and *N. ornata branickii*. He noticed that the diagnostic features separating them had been exaggerated in the type description of *kalinowskii*. The principal stated differences from *branickii* are that *kalinowskii* is paler and greyer, and has longer wings. A comparison of the type with 12 specimens of *branickii* from dptos. Apurímac, Ayacucho, Junín and Ancash reveals that these differences represent no more than individual variation. Several other specimens are equally as pale and grey as the type of *kalinowskii*. The length of the flattened wing is 183 mm in the type of *kalinowskii*, 170 mm in the type of *branickii* (both are males). In three other adult male *branickii* the length is 163–179 mm (in six adult females 166–192 mm). The most notable difference between the types of *kalinowskii* and *branickii* is the finer barring on the secondaries of *kalinowskii*, but the pattern and coloration of this tract vary considerably in specimens of *branickii* at hand. The fine barring of the tertials spreads onto a variable number of secondaries, and the pale bars on the remaining secondaries vary from buff, wavy and narrower than the dark bars, to rufous, straight and the same width as the dark bars, suggesting that the type of *kalinowskii* is merely an extreme individual variant in this respect.

Blake (1977) noticed that three specimens in the American Museum of Natural History, New York (AMNH), from dpto. Junín are somewhat redder on the belly than three in the Field Museum of Natural History, Chicago (FMNH), from dptos. Apurímac and Ayacucho. One specimen in the Natural History Museum, Tring (BMNH), from Huancavelica has a similar reddish belly. However, the type of *branickii* from dpto. Junín is nearly as extensively grey on the underparts as the Apurímac and Ayacucho specimens, including the type of *kalinowskii*. Six recently collected specimens in AMNH and the University of California, Museum of Vertebrate Zoology, Berkeley (UCMVZ), of *branickii* from dpto. Ancash also do not differ appreciably from the greyer specimens collected further south. Evidently *branickii* is variable in the colour of the underparts.

How the specimen from dpto. La Libertad in north-west Peru was ever referred to *kalinowskii*, and the resulting extraordinary distribution accepted without question, is a mystery. This specimen never was compared directly with the type. The first mention of it in the literature appears to be in Meyer de Schauensee (1966), who reported the specimen as *kalinowskii* 'fide [Maria] Koepcke'. It is of unknown sex and was collected in the western Andes at Hacienda Tulpo, dpto. La Libertad, in 1900, and is retained in AMNH. Published illustrations of Kalinowski's Tinamou (Fjeldså & Krabbe 1990, del Hoyo *et al.* 1992) were based on this specimen. Subsequently, Vasconcelos (2002) published a description and

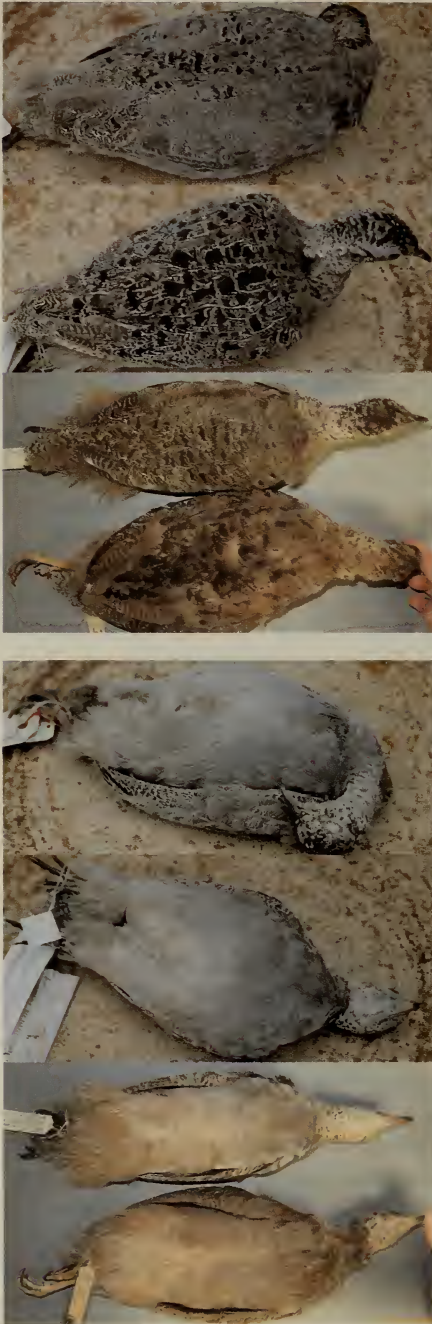


Figure 1 (this page). Dorsal, ventral and wing views of (anticlockwise from top): MIZPAS P 2306 type of *kalinowskii*, MIZPAS P 2309 type of *branickii*, AMNH 814068 *branickii* from Ancash, Peru, and AMNH 469176 *kalinowskii* from Tulpo, La Libertad (Niels Krabbe)

Figure 2 (opposite page). Dorsal and ventral views of the plumage of *Nothoprocta ornata*. Top left to right 12 *N. o. branickii*: FMNH 25119 female (Apurímac), FMNH 25295 male (Apurímac), FMNH 18894 female (Ayacucho), AMNH 165427 female (Junín), AMNH 165426 female (Junín), AMNH 165428 male (Junín), UCMVZ 161354 female (Ancash), AMNH 814069 female (Ancash), AMNH 814070 unsexed (Ancash), AMNH 814068 male (Ancash), UCMVZ 161356 immature male (Ancash), UCMVZ 157675 immature male (Ancash). Bottom left to right one *N. o. rostrata* and seven *N. o. ornata*: ZMUC 20.12.1910.6 female (Tucumán), ZMUC 91643 female (Cochabamba), ZMUC 91644 male (Cochabamba), UCMVZ 125590 female (Puno), UCMVZ 125591 male (Puno), UCMVZ 124272 male (Puno), UCMVZ 125592 immature male (Puno), UCMVZ 125140 male (Puno) (Niels Krabbe)





TABLE 1
Reconstruction of Kalinowski's travels in Peru and Bolivia. Based on published literature and a digitised database of the bird specimens in Warsaw Museum.

| Date | Year | Department | Locality | Notes |
|-----------------|-----------|------------|---------------------------------|---|
| 24 Aug–25 Oct | 1889 | Lima | Lima | |
| 26 Oct | 1889 | Lima | Chorillos | |
| 29 Oct - 21 Nov | 1889 | Lima | Lima | |
| 22 Nov–31 Dec | 1889 | Ica | Ica | Incl. Hacienda Ocucaje and Hacienda Huamani |
| 14–24 Jan | 1890 | Lima | Lima | |
| 29 Jan | 1890 | Lima | Ancón | |
| 31 Jan–22 Mar | 1890 | Lima | Lima | Incl. Magdalena and Magdalena Vieja |
| 21 Apr | 1890 | Lima | Baños | |
| 27 Apr | 1890 | Lima | Chicla | |
| 29 Apr | 1890 | Lima | Baños | |
| 30 Apr | 1890 | Junín | San Blas | |
| 2 May–29 Jun | 1890 | Junín | Junín | Incl. Lake Junín, Ingapirca, Jez. Junín |
| 10 Jul | 1890 | Junín | Palcamayo | |
| 11 Jul | 1890 | Junín | Acobamba | |
| 13 Jul–16 Sep | 1890 | Junín | Chanchamayo | Incl. Hacienda La Merced and Hacienda La Gloria |
| 21 Sep | 1890 | Junín | Acobamba | |
| 24 Sep | 1890 | Junín | Tarma | |
| 5–11 Oct | 1890 | Junín | Junín | Incl. Ingapirca and Jez. Junín |
| 15 Dec | 1890 | Junín | Tarma | |
| 30 Dec–11 June | 1890–1891 | Junín | Chanchamayo | Inc. Hacienda La Merced, Hacienda La Gloria and Hacienda La Borgona |
| 16 Jun–3 Oct | 1891 | Junín | Vitoc | Incl. Hacienda La Garita del Sol and Hacienda La Gloria |
| 25 Oct–22 Dec | 1891 | Junín | Maraynioc | Incl. Pariayacu |
| 21 Mar | 1892 | Lima | Lima | |
| 22 Jun–14 Dec | 1892 | Junín | Maraynioc | Incl. Pariayacu, Chulumachay, Tendalpata, Hacienda La Merced, Hacienda Garita del Sol (Vitoc) and Huacras |
| 24 Dec | 1892 | Junín | Tapo | |
| 25–27 Dec | 1892 | Junín | Tarma | Incl. Hacienda Queta |
| 27 Dec | 1892 | Junín | Tapo | |
| 1 Jan–21 Jun | 1893 | Junín | Maraynioc | Incl. Chulumachay, Tendalpata, Pariayacu, Sarnapaycha, Hacienda La Garita del Sol (Vitoc), Tambo de Aza, San Emilio |
| 8 Jul–2 Sep | 1893 | Junín | Tarma | Incl. Janja and Hacienda Queta |
| 12 Nov–27 Jan | 1893–1894 | Ayacucho | Cora Cora | |
| 14 Feb–11 Apr | 1894 | Ayacucho | Pauza Mountains near Licamachay | |
| 7 May | 1894 | Apurímac | Casinchihua | |
| 10 May | 1894 | Apurímac | Curahuasi, Apurímac Valley | |
| 13 May | 1894 | Cuzco | Cuzco | |
| 21 May | 1894 | Cuzco | Cuzcohuata | |

| | | | | |
|------------------|-----------|--------|--------------------------|--|
| 31 May–21 Dec | 1894 | Cuzco | Idma, Hacienda Santa Ana | Incl. Puna de Idma |
| 24–27 Jun | 1895 | Cuzco | Vilcabamba | |
| 6–28 Dec | 1895 | Puno | Puno | |
| 5 Jan | 1896 | Cuzco | Checcacupi | |
| 30 Jan and 8 Mar | 1896 | Cuzco | Cuzco | |
| 22 Mar–28 Jun | 1896 | Puno | Puno | |
| 2 Jul | 1896 | Puno | Pujuni | |
| 2 Jul | 1896 | Puno | Pichacani | |
| 4 Jul | 1886 | Puno | Titirí | |
| 5 Jul | 1896 | Puno | laguna de Pakará | |
| 5–6 Jul | 1896 | Puno | Huacochujo | |
| 6–7 Jul | 1896 | Puno | Pichacani | |
| 15–25 Jul | 1896 | Puno | Titirí | |
| 25 Jul | 1896 | Puno | Pujuni | |
| 17 Sep–7 Dec | 1896 | La Paz | Chulumani | Incl. Choquechaca and Tusiguaya |
| 8 Dec | 1896 | La Paz | La Florida | |
| 8 Dec | 1896 | La Paz | Puente de Chupe | |
| 10 Dec | 1896 | La Paz | Huacuyu | |
| 17 Jun | 1897 | Cuzco | Chilichili | |
| 2 Jul | 1897 | Cuzco | Iscaybamba | |
| 6 Jul–7 Dec | 1897 | Cuzco | Marcapata Valley | Incl. Huaynapata and Saniaca |
| 10–17 Jan | 1898 | Cuzco | Cuzco | |
| 4 Jul | 1898 | Cuzco | río Garrota | |
| 11 Jul–28 Dec | 1898 | Cuzco | Marcapata | Incl. Huaynapata, río Cadena and Escopal |
| | 1902–1930 | Cuzco | Marcapata | Incl. Hacienda Cadena, Cadena, río Cadena, Paucartambo |

photograph of a rather similar specimen taken nearby as *N. kalinowskii*. It is a male housed in the ornithology collection of the Universidade Federal de Minas Gerais (DZUFMG), in Belo Horizonte, Brazil, and was collected in 1970 at Sinsicap, Otuzco, dpto. La Libertad. These two have slightly darker rufous bars than those specimens of *N. ornata branickii* that exhibit broad rufous bars on their secondaries. They are also a trifle more saturated reddish on the rest of the body. The belly appears to vary in the same way as in specimens from further south. That of the AMNH specimen is fairly reddish, whereas that of the DZUFMG specimen (judged from the published photo) is more washed with grey. On the basis of just two specimens and in view of the variability of other populations we consider the difference to be no more than trivial variation, but admit that the collection of a larger series might demonstrate the La Libertad population to be worthy of recognition as a subspecies of *Nothoprocta ornata*.

Acknowledgements

We are indebted to Dr Mazgajski of the Polish Academy of Science, who kindly forwarded a digitised database of the Peruvian specimens in the Warsaw Museum (MIZPAS); to Malgorzata Adamczewska,

who carefully checked specific birds in the MIZPAS collection and was of great assistance during NK's visit to the collection; to Bøje Benzon's Foundation, who generously funded NK's visit to the Warsaw museum; to the curators of various museums: Paul Sweet (AMNH), Katrina Cook (BMNH), Shannon Hackett (FMNH), Becky Williams and Carla Cicero (MVZ), and C. Rahbek, Zoological Museum, Univ. of Copenhagen (ZMUC), for the loan of specimens or taking and sending of specimen photos. We are grateful to Laura Rico for preparing the map.

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APPENDIX

Specimens examined:

- N. ornata rostrata*: 1 female, Tucumán, Argentina (ZMUC)
- N. ornata ornata*: 1 female, 1 male, Cochabamba, Bolivia (ZMUC); 4 males, 1 female, Puno, Peru (UCMVZ)
- N. ornata branickii*: 1 male, mountains near Licamachay [Apurímac] (type of *kalinowskii* in MIZPAS); 1 male, 1 female, Apurímac (FMNH); 1 female, Ayacucho (FMNH); 1 male, Huancavelica (BMNH, photos); 1 male, Junín (type of *branickii* in MIZPAS); 1 male, 2 females, Junín (AMNH), 1 male, 1 female, 1 unsexed, Ancash (AMNH); 2 males, 1 female, Ancash (UCMVZ); 1 unsexed, La Libertad (AMNH, photos of specimen referred to *kalinowskii* in the literature); 1 male, La Libertad (published photo of specimen referred to *kalinowskii* in DZUFMG).